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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/832,867 | 04/12/2001 | Shunpei Yamazaki | 740756-2294 | 1394 |

31780 7590 01/04/2007
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| EXAMINER |
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LEWIS, MONICA

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| ART UNIT | PAPER NUMBER |
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2822

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/04/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/832,867

Applicant(s)

YAMAZAKI ET AL.

Examiner

Monica Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-14,25-38 and 51-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-38 and 51-64 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10,13 and 14 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the request for continued examination filed November 30, 2006.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/06 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-14, 25-38 and 51-64 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

4. The indicated allowability of claims 2, 4, 6-8 and 10 are withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Specification

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the protecting film must be shown or

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the feature(s) canceled from the claim(s) (For Example: See Claim 1). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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8. Claims 1, 2, 4-10, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki (U.S. Patent No. 6,909,114).

In regards to claim 1, Yamazaki discloses the following:

- a) a pixel portion having a n-channel TFT and a light emitting element over a substrate (100) (For Example: See Figure 2B);
- b) a channel forming region (121) (For Example: See Figure 2B);
- c) an n-type impurity region (124) adjacent to the channel forming region (For Example: See Figure 2B);
- d) an n-type impurity region (126) adjacent to the n-type impurity region (124) (For Example: See Figure 2B);
- e) an n-type impurity region (122) adjacent to the n-type impurity region (126) (For Example: See Figure 2B);
- f) a gate insulating layer (103) provided over the active layer (For Example: See Figure 2B);
- g) a gate electrode (108 and 109) provided over the gate insulating layer (For Example: See Figure 2B);
- h) a first conductive film (108) provided over the gate insulating layer (For Example: See Figure 2B);
- i) a second conductive film (109) provided over the first conductive film, wherein the first conductive film overlaps the channel forming region and the n type impurity region with the gate insulating layer interposed therebetween, and wherein the second conductive film overlaps the channel forming region with the gate insulating layer and the first conductive film interposed between and the second conductive film has a thinner width as compared with the first conductive film (For Example: See Figure 2B);
- j) a protecting film (130) in contact with the gate insulating layer and the second conductive film (For Example: See Figure 12B); and
- k) the first conductive film comprises one of tantalum nitride and titanium nitride and the second conductive film comprises tungsten (For Example: See Column 6 Lines 38-50).

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In regards to claim 2, Yamazaki discloses the following:

a) a driver circuit (203 and 204) having a n-channel TFT and a light emitting over a substrate (300) (For Example: See Figure 10);

b) a pixel portion having a light emitting element over the substrate (For Example: See Figure 12B);

c) a channel forming region (331) (For Example: See Figure 12B);

d) a n-type impurity region (335) adjacent to the channel forming region (For Example: See Figure 12B);

e) a n-type impurity region (337) adjacent to the n-type impurity region (335) (For Example: See Figure 12B);

f) a n-type impurity region (333) adjacent to the n-type impurity region (337) (For Example: See Figure 12B);

g) a gate insulating layer (305) provided over the active layer (For Example: See Figure 12B);

h) a gate electrode (370) provided over the gate insulating layer (For Example: See Figure 12B);

i) a first conductive film (371) provided over the gate insulating layer (For Example: See Figure 12B);

j) a second conductive film (109) provided over the first conductive film, wherein the first conductive film overlaps the channel forming region and the n type impurity region with the gate insulating layer interposed therebetween, and wherein the second conductive film overlaps the channel forming region with the gate insulating layer and the first conductive film interposed between and the second conductive film has a thinner width as compared with the first conductive film (For Example: See Figure 12B).

In regards to claim 4, Yamazaki discloses the following:

a) the first conductive film comprises one of tantalum nitride and titanium nitride and the second conductive film comprises tungsten (For Example: See Column 6 Lines 38-50).

In regards to claims 5 and 6, Yamazaki discloses the following:

a) the first conductive film comprises tungsten and the second conductive film comprises aluminum (For Example: See Column 6 Lines 38-50).

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In regards to claims 7 and 8, Yamazaki discloses the following:

a) the n-type impurity region includes an n-type impurity element in concentrations from 1×10^{20} to 1×10^{21} atoms/cm³, the n-type doped region includes an n-type impurity element in concentrations of from 2×10^{16} to 5×10^{19} atoms/cm³, and the n-type doped region includes an n-type impurity element in concentrations from 1×10^{16} to 5×10^{19} atoms/cm³ (For Example: See Column 9 Lines 45-67).

Additionally, the applicant has not established the critical nature of concentrations from 1×10^{20} to 1×10^{21} atoms/cm³, 2×10^{16} to 5×10^{19} atoms/cm³, and 1×10^{16} to 5×10^{19} atoms/cm³. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).

In regards to claims 9 and 10, Yamazaki discloses the following:

a) the gate electrode is covered by an insulating film (307) comprising at least one of a silicon nitride film and a silicon oxynitride films are laminated (For Example: See Column 17 Lines 29-32).

In regards to claims 13 and 14, Yamazaki discloses the following:

a) the light emitting device is one selected from the group consisting of an EL display, a video camera, a digital camera, a portable computer, a personal computer, a portable telephone, and a car audio stereo (For Example: See Figure 32A).

Allowable Subject Matter

8. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 25-38 and 51-64 are allowed.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 571-272-1838. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular and after final communications.

ML
December 26, 2006

A handwritten signature in black ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.